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JULY, 1942

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ALTHOUGH predictions that workers would be frozen in war jobs have not thus far materialized, industry must plan today for total manpower control. This is the warning sounded in the feature abstract of this issue, which forecasts an acute manpower shortage—with possible drastic labor supply regulations—by this fall. Management would do well to study its chances for labor preference now, with *essentiality* the criterion in each case. Under labor priorities, for instance, the makers of luxury goods will be accorded no preference whatever. As orphans of industry, they will have to make shift as best they can with submarginal and reserve-type workers.

More and more companies, even in essential fields, have already increased their proportions of women, older workers, handicapped workers, negroes and certified aliens. Thus, some plants are operating all-negro shifts or departments, and one shipbuilding firm has announced that it will employ 9,000 colored workers in its new all-negro yards. However, if British experience is any guide, we still have a long way to go before we exhaust our reservoirs of labor. For example, proportionately ten times as many women workers are employed in British war industries as are employed in war plants here.

But we are moving gradually toward something resembling British National Service, according to this article. Under the British scheme, individual usefulness is the prime consideration, and recruiting and volunteering yield place to assignment and allocation both in industry and the armed forces.

FORTY-FIVE battleships could have been built with the 480,000,000 man-days lost to industry last year through industrial accidents, according to an abstract on page 237. Casualties on the home front, in fact, are handicapping the war effort more than any other single factor—and with new workers being trained at breakneck speed, the toll is rising. The author has outlined a four-point program which it is claimed will reduce the severity and frequency of accidents 50 per cent.

THE MANAGEMENT INDEX

General Management

Get Ready Now for Manpower Control

TWO-POINT memo to management *re* manpower: (1) Don't expect a government labor "commissar" to move into your plant personnel office and take over tomorrow, but (2) don't fail to prepare now for total control. That summarizes the conclusions which may be drawn from an intensive study of the manpower problem.

Factory trod the corridors of Washington for several weeks, getting guesses from the experts, the high and the low, and asking, substantially, this one question: "At what point do you expect an acute general shortage of manpower?"

The experts say frankly that they are guessing. Their estimates range from September, 1942, to June, 1943. *The consensus is November, 1942.* This is the first time anyone has closed the switch on the American industrial machine and let it run at full speed. What will slow it down first—lack of materials, transportation or manpower? Your guess is about as good as the experts'.

If this were not a democracy, drastic regulation would already be well on the way. Some of New York's 400,000 unemployed, for example, would be herded into trains and shipped off to Detroit where industrial employment, according to a War Production Board survey, will hit 660,000, just 50 per cent above peacetime peaks, by November 1. But this *is* a democracy, and democracies tend to wait for a crisis before evolving a solution. Hence the period of drastic regulation will date *from* the period of acute general labor shortage, and there will be an experimental time-lag in developments thereafter.

Total mobilization, it is believed, will take form along English lines. We shall move toward something resembling British National Service, the big philosophical point of which is *essentiality*. Under National Service, recruiting and volunteering (military and industrial) cease; assignment and allocation take their place. Compliance is largely voluntary, but legal compulsions reinforce it. Manage-

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ment's peacetime hiring prerogatives are severely restricted; but, since public opinion is strongly on the side of National Service, it does management little good to complain, irritating as it may find the fact that labor has a strong voice in the determination of mobilization policy.

No one can say exactly which activities will be deemed essential, but in Britain the following industries have been declared critical: ship operation and management, coal mining and ancillary processes, building and civil engineering, iron and steel, agriculture (Scotland only), railway operations, cotton manufacture. In addition, some 20,000 firms have been listed in the British Schedule of (Essential) Undertakings. Names of these latter have never been made public, nor has Britain announced which industries it does not consider essential.

Over-all, employers should build their personnel structures to endure throughout the war. Management must thus:

1. Get set for the time when the government will assign to it a minimum number of essential jobs—not men, jobs—which the government will then contract to keep filled. For the rest of its jobs, management will have to make what shift it can.
2. Get set for the time when it will be called upon to demonstrate the essentiality of its own operations, and begin amassing data. This does not apply so much to companies—and perhaps whole in-

dustries—which are obviously essential to the war effort.

3. Get set for the day when it may have to prove to government plant inspectors that it has upgraded and utilized skills to the limit, that it has exhausted reserves of local labor (women, negroes, older workers, handicapped workers, certified aliens), and that it maintains an in-plant training system satisfying minimum government requirements—all this to get any preference in labor supply at all.

This doesn't mean that management should turn out its younger men tomorrow and load up on reserve-type workers. It does mean that, for replacement and expansion, management will do well to increase the *proportion* of its reserve-type employees. Short-range, here are two suggestions:

1. Management should leap at any opportunity to take a strong part in regional War Manpower Commission labor-management committees which will be named shortly.
2. Management should intensify its morale-building job—especially with a view to selling younger married employees on the importance of what they are doing in the plant (the dependency allowance will move many of them to volunteer for military service).

It's impossible to generalize further. A manufacturer of powder puffs might be well advised to re-staff his entire plant immediately with one-

armed negro women, aged 60. On the other hand, a manufacturer with a monopoly—if such there be—on some vital bomber part might pirate labor, hoard labor, and defy regulations with perfect safety.

Generally speaking, however, the outlook is that mobilization will not “get going” broadly until the wage stabilization issue is solved. But this

does not mean that industry should stop analyzing and planning for eventual total mobilization. Nor should it underestimate the WMC. That Commission, or something so like it that no one will know the difference, will do the job. Total war means total control—and this is total war. *Factory Management and Maintenance*, July, 1942, p. 58:7.

Transportation: No. 1 Headache

IF anyone in Washington suffers from nightmares, it must be Joseph B. Eastman, Director of the Office of Defense Transportation. Visions of war plants without raw materials must trouble him—of armaments rusting on shipping platforms, of crops rotting in the fields, of workers kept from their jobs, of people without fuel or food, of bursting warehouses and staggering trains. And terrible scenes must pass before his mind's eye—row on row of tireless buses, acres of trucks on the rim, miles of discarded automobiles.

Fortunately, these pictures are still bad dreams, but many of them could be realities tomorrow. If Mr. Eastman and the ODT have seemed to move slowly up to now, it is only that Eastman's policies—minimum rules, maximum voluntary cooperation, and direct action only when facts are clear—have been closely followed. There is little doubt, however, that extensive control of non-essential traffic—goods and people—is inevitable.

What can industry do to ameliorate

the situation? Here is a check list of management policies which will help to reduce the strain on transportation facilities:

Shipping—Industry accounts for the major share of the nation's freight.

1. Work closely with carriers—rails, motor lines, barges, etc. Ship where the load is lightest, the route shortest.

2. Put shipping and receiving rooms on schedules to fit the carriers' convenience. Many truck lines report wasting precious hours, even days, because a receiving room was closed for the day, necessitating a call-back.

3. Try to have materials ready for one pickup a day, and make it a full load. Consider carefully before deciding “it must move today.”

4. Concentrate shipments. Point toward capacity loads.

5. Buy in capacity-load quantities where possible.

6. Check opportunities for buying now for stockpiles. The War Produc-

tion Board has lifted inventory restrictions on coal and sulphur to encourage heavy movements before the seasonal peak.

Workers—Unless the men who produce can get to their jobs, the war will be lost.

1. Encourage and assist employees in developing group-riding plans to save tires and gasoline.

2. Cooperate with local transit services and local war transport committees. Perhaps staggered hours or a few added buses will ease the load.

3. Provide special buses, converted haulways, trailers, to carry workers where necessary. Larger vehicles mean more workers per tire.

4. Help employees find housing closer to the plant. Some companies find that employees can swap housing with workers in some more distant plant.

Trucks—Manufacturers own and operate 2 million of the 4.7 million trucks in this country; they must conserve this vital pool of equipment.

1. Don't apply for new trucking equipment until all other avenues have been explored—salvaging or adapting present equipment, buying or leasing idle equipment in the area.

2. Whether you own one truck or a fleet, install a preventive maintenance program. If you're not warranted in setting up a complete maintenance system, make use of the best service shop in your area. A nearby trucking concern; or fleet operator or the manufacturer of your vehicle can give helpful advice.

3. If you can't get sufficient essential use from equipment, find out who can. And if you store idle trucks, put them on blocks, cover moving and exposed parts with grease, put tires in a cool place.

Automobiles—A car is no longer private property; it is a public trust. (If you have no essential use for it, others will have—and soon.)

1. Whenever possible, store salesmen's cars; they may be used as replacements for workers' cars.

2. Increase efficiency in the use of salesmen's and servicemen's cars by doubling up, re-routing, emphasizing the local sales effort.

3. Induce customers to accept service that fits into planned routes, scheduled stops at scheduled times. Customers will accept this—they must.

Modern Industry, June 15, 1942, p. 40:6.

Executive Turnover

DISMISSAL and quit rates in the executive group are highest among production managers, figures released by the McGraw-Hill Company show. A survey of the changes that occurred in 5,000 companies from 1939 to 1941 reveals that 29.5 per cent of the production managers were replaced during that period. Next most likely to be replaced, it appears, were the sales managers, 23.5 per cent of whom quit or were discharged; and design engineers, of whom 22 per cent were replaced.

Vice presidents changed fairly fast too—19 per cent in two years; and even presidents, it appears, do not enjoy very long job tenure—the rate for them was 11 per cent.

—*Dartnell News Letter* 5/23/42

Office Management

How Studebaker Controls Office Expenses

AT Studebaker Corporation, South Bend, Ind., *prevention* of office expenses has proved the most effective method of control. This company's experience yields a number of valuable cost-saving ideas that should find wide application in industry.

In establishing its expense control plan, Studebaker first made detailed analyses of office costs and issued divisional and departmental statements that correctly assigned responsibility for these expenses. Budgets were then prepared and submitted to management for approval. Actual expenses are compared monthly, quarterly and annually with budgeted amounts. In addition to this control, management approval is required of all unusual expenditures in excess of \$100.

The company has devised a stationery and supplies stock control plan which reduces inventory requirements 50 per cent and provides complete inventory control at all times. First, the stock control personnel was divided into two distinct units: those in charge of actual stock, and those in charge of records. The duties of the first unit are to receive, issue and protect the material under their control. The stock record unit must maintain a proper record of materials, carefully watch minimums, and know the balance on hand at all times.

In ordering stationery and supplies,

such factors as transportation, storage, possible combination runs, and operating needs must be taken into account before the most economical quantities can be determined. Materials are stored in an orderly and convenient manner to simplify handling. Wherever possible, use is made of bins or racks, but if this is not feasible the stock is stored in unit piles. Bins are legibly numbered or lettered so that particular items can be easily located.

Control is facilitated by a 13-step stock record system. But the installation of control records, Studebaker has found, must be approached with care. Not only the stockroom personnel, but all other employees coming in contact with the control system, should be familiarized with its operation through discussion and written instructions.

Revision of the company's accounts receivable forms has resulted in annual savings of \$150 in the cost of forms and carbons. A single standard ledger card has been developed, and the size of this has been reduced 42 per cent through use of a code system and the elimination and combination of certain data. The company's statement form was shortened following an analysis of postings which disclosed that 87 per cent of the accounts had less than five inches of postings per month.

Old-fashioned inkwells are being replaced by the so-called Dip-a-day sets

which list at \$1.00 (those who use hectograph ink will find this new item more economical and convenient). Automatic pencils are also being adopted to reduce expense and save time. Five-drawer files are replacing four-drawer equipment and conserving up to 20 per cent of floor space.

Studebaker has found it more economical to maintain its own office repair department for typewriter maintenance and minor repairs on other machines. The employment of a full-time crew of maintenance painters has also proved a less costly and more flexible arrangement than the hiring of outside workmen.

The company has obviated the need for Venetian blinds or awnings on its office windows facing south or west by painting the windows with aluminum or blue paint. Where appearance is not the determining factor, this device has much to commend it. Aluminum paint will reduce heat, and there is said to be a blue paint which will admit 94 per cent of the light and eliminate 15 per cent of the heat. BY W. E. TARR. From the Proceedings of the 1941 Seminar, Office Management Association of Chicago, p. 39:13.

NOTE: For a description of this company's methods of curtailing telephone, telegraph and postal expenses, see *Office Management Series No. 85* of the American Management Association. — Ed.

What Do Your Letters Cost?

A question which thus far has never been satisfactorily settled is, "How much does it cost to write a letter?" Estimates have run all the way from 15 to 45 cents, depending on the length of the letter and the value of the dictator's time. Obviously the cost of a letter dictated by a \$25,000-a-year executive to a \$50-a-week secretary would cost more than a letter of similar length dictated by a \$2,000 sales correspondent to a \$25-a-week stenographer. It remained for Benjamin Haynes, of the University of Tennessee, and Harry T. Miller, of the Tennessee Valley Authority, really to go into a huddle and come forth with an impressive analysis of letter costs. This has just been published in pamphlet form by the Gregg Publishing Company, New York (25 cents). Their study reveals that it costs on the average \$.2003 to dictate a letter, allowing 10 minutes for the job. It costs another \$.1002 to take the dictation in shorthand. (This cost, of course, can be reduced by using dictating machines and a central transcribing department.) It costs \$.1002 to transcribe a letter. The supplies: The cost of carbon paper is \$.0010; the cost of the stenographer's notebook is \$.0016; postage, \$.029; stationery, \$.0060. To be added are depreciation charges on office equipment, maintenance of equipment, and filing expense. Then there are supervision and such overhead items as vacations, sick leave, taxes, etc. Since so many of these charges are indeterminable, the survey does not attempt to fix a total average cost, but it would be around \$.5192 a letter. When you multiply this cost per letter by the number of letters written each day in the average establishment, business correspondence becomes an expense of some magnitude and certainly worth doing something about.

—American Business 12/41

No Signatures, More Suggestions

BUNDY ENGINEERING COMPANY, New York, recently installed a suggestion system that is proving profitable to both the employees and the management. The success of the system is largely due to the manner in which the suggestions may be made.

The company realized that the cooperation of all employees could be obtained only if some system were devised which would protect the vanity of the contributor whose suggestion was rejected. To this end a numbered suggestion blank with a correspondingly numbered stub was adopted. A pad of 50 sheets is fastened alongside a slotted box in which the suggestions are to be placed, and the suggester need only jot down his idea and deposit the blank in the box, retaining the stub for future identification. At the end of every month the blanks are collected and checked by the awards committee. Numbers on the sheets containing accepted suggestions are posted, and the employees holding the correspondingly numbered stubs are requested to appear for their awards. Thus the employee need not sign his name or risk being ridiculed if his suggestion should sound foolish.

Because of the difficulty of determining the ultimate value of many of the accepted ideas, the awards committee makes only a token payment—\$2 to \$10—when the suggestion is adopted. At the end of each year, suggestions are reviewed and additional awards are made, the amount depending on the actual savings achieved.

—ALFRED ROBBINS in *Factory Management and Maintenance* 4/42

What Constitutes Evidence of Citizenship?

MANY valuable man-hours of labor are being lost needlessly because of widespread misunderstanding regarding the employment of aliens.

The War and Navy Departments require employers holding certain types of war contracts to obtain, from the contract-awarding department, permission to hire aliens. An erroneous impression has thus been created that the above ruling is wholly prohibitive and that it applies to all war contracts. As a result, native Americans, as well as aliens loyal to the United States, are being refused employment or are required to wait weeks for documentary evidence. This is contrary to the public policy expressed by President Roosevelt.

Temporary grants may be obtained, when permits are necessary, for applicants who cannot immediately supply evidence of citizenship. Such grants are contingent upon reasonable assurance of citizenship, pending receipt of valid certificates. Employers in such instances should apply to the Army or Navy Plant Protection Inspector having jurisdiction at the specific plant.

The War and Navy Departments recommend that the following other types of identifying data, when properly documented, be accepted in lieu of a birth certificate:

1. Hospital record of birth
2. Physician's record of birth
3. Local or state census of birth
4. Family Bible record
5. Baptismal, cradle roll, confirmation certificate, or any other recognized church record of birth
6. School record of birth date
7. Birth date as revealed by Army, Navy or Marine discharge
8. Birth date as revealed in insurance policies
9. Birth date recorded on such documents as:
 - a. Driver's license
 - b. Marriage license
 - c. Voting registration record
 - d. Employment record
 - e. Birth certificate of one's child
 - f. Record of professional, social or fraternal organizations
10. Record of the Bureau of Census, Washington, D. C.

—*Service Digest*, U. S. Employment Service (New Jersey) 6/42

Personnel

Safety Information for the New Employee

IT is important that every new employee receive an early introduction to a company's safety program and policies. If safety is handled as an afterthought either in induction or instruction, the employee may consider it as something apart from his regular duties.

Handling the Initial Interview: The supervisor should always take into account the man's previous experience. If this is his first job—what, if anything, does he know about industrial safety in general? If he received training at a trade or vocational school—what attention, if any, was paid to safe work practices? If he has been employed in another company, what safety program does that company have? What was the employee's injury record? If these facts are not known beforehand, the supervisor should attempt to draw them out during the interview.

Providing the Employee with Information About the Company's Safety Program: Information concerning the company's safety program and policies should be given at the same time as information concerning general policies. Stress the measures to guard machines and minimize physical hazards, as well as management's interest in the workers' well-being.

Providing the Employee with Information About Safety at His Work: When the employee is being given in-

formation about his work, point out the hazards to which he will be exposed: (a) in the type of work to which he will be assigned; (b) as a result of work being performed in his immediate vicinity; and (c) as a result of operations or processes carried on in the department. The supervisor should stress the precautions which the employee must take to avoid injury, and *emphasize individual responsibility* for safety and the advantage to the employee. The supervisor should also point out the dangers attendant upon "horseplay" and the unauthorized use or the misuse of air hose and other equipment. Company rules and safety measures and activities should be outlined clearly. The employee should be shown the first-aid room, and have explained to him rules concerning the reporting of even "trivial" injuries.

Safety in "Hazardous" Plants: In many war production plants, conditions should frankly be described to the employee as "hazardous." Make the distinction between "dangerous" and "hazardous." Where explosions can be caused by carelessness, only the thorough observance of a rigid safety program can keep a hazardous plant from being a dangerous one. If accident probability is high, more restrictions may be necessary; for example, employees may be permitted to move about only in their working

area, and the design of clothing may be adapted to special hazards.

Responsibility for Introductory Material on Safety: The safety performance of the new employee, like his work performance, is the responsibility of his supervisor. A safety program supervised by a safety engineer does not excuse the supervisor any more than an organized plan of induction justifies failure to follow through on the general induction process.

When a transferred or rehired em-

ployee enters a new department, he needs almost as much safety information and training as the new man. He may know the company's general policy, but he needs information about his new assignment. The new department probably will have its own rules and hazards. If a bad accident record figured in reasons for a layoff, previous discharge, or transfer, stress safety rules and regulations particularly.

From a bulletin of the Training Within Industry Branch of the War Manpower Commission.

Working Hours in War Production Plants

IN 14 war industries recently surveyed by the Bureau of Labor Statistics, the workers in more than half of the plants studied averaged over 48 hours per week in February, 1942.

Sunday operations have been confined chiefly to the continuous-process industries. Of the iron and steel mills surveyed, 36 per cent had more than 50 per cent of their wage earners at work on Sunday. Only 16 per cent of the plants in 14 other war industries as a whole had such crews on Sunday work.

Marked progress has been made in most war industries in moving toward continuous operation to increase output. Exclusive of the major continuous-process industries, about 40 per cent of the war workers are now on extra shifts, as compared with approximately 25 per cent in December, 1940.

Examination of the situation in the various industries studied leads to the belief that:

1. On the whole, it will not be possible to increase production greatly in the war industries by further increases in the length of scheduled shifts for individual workers.
2. In some plants and in some industries it should be possible to increase orders or the flow of materials sufficiently to permit the scheduling of 48-hour shifts where schedules now call for 40 or 44 hours per week. This possibility of increased production is greater in the supply industries (like electrical apparatus and supplies) that have not been fully geared to war production than it is in the munitions industries.
3. For the most part, expansion of production with existing plant facilities requires the addition of more workers. This is generally possible, provided the plant has a vigorous training and upgrading program. In most plants, employment and production on the evening or night shift can be greatly expanded. In almost all plants there is an opportunity to develop a relief shift to permit seven-day operation of the plant with workers on six-day schedules.

—Monthly Labor Review 5/42

Retail Experience with Employee Testing

IN an effort to determine the extent to which stores are using special aptitude and dexterity tests as one method of meeting the employment placement problem, some 39 member firms, ranging in volume from \$750,000 to over \$15,000,000 per year, and representing key sections of the country, were recently surveyed by the National Retail Dry Goods Association.

Of the 39 cooperating organizations, approximately two-thirds stated they were using some form of testing for some or all classes of their pre-employment applicants. Of this number, 12 stores further indicated that the type of examination administered was of simple home-made origin, designed to test an individual's job aptitude rather than his I.Q. or personality quotient.

Although the subject material covered in the tests varied according to the job classifications, they all followed basically an informal pattern and included simple arithmetical problems, spelling comparisons, selection of correct grammatical expressions, selection of similar and dissimilar terms, words or figures, etc.

A cashier's test, for example, would of necessity place greater emphasis on speed and accuracy in mathematics than would a test for a stenographer or a business machine operator which emphasized actual job performance. In the latter instances, applicants are posed with the actual job situation and given dictation . . . or a letter to type . . . or a machine to operate . . . and

then observed for accuracy, familiarity with the routine, knowledge of the tools of the trade, skilfulness, etc.

The remaining 10 stores of the 22 that reported the use of tests indicated that they administered standard aptitude tests such as the Thurstone Typing Test for stenographers; the Scott-Clothier or the Otis Mental Alertness Test, both of which measure general intelligence and the ability of an individual to respond to a novel situation; the Johnson O'Connor Workroom Sample 1, which measures clerical aptitude and which one store uses as an aid in transferring a regular employee from a non-clerical to an office job. This same store also uses the Johnson O'Connor Workroom Sample 16 (which measures finger dexterity), not as a pre-employment test but as a means of checking doubtful production of extra employees who are being considered for the regular payroll in the Marking Division.

Another standard test reported in use is the Minnesota Clerical, which measures speed and accuracy in the perception of similarities and differences. This is used as a guide in determining a prospective clerk's ability.

That testing, as used by retail firms now, applies more extensively to those in the non-selling than in the selling divisions is evidenced by the more frequent reporting of dexterity, aptitude or trade tests for stenographers, cashiers, wrappers, packers, clericals, and business machine operators than for

salespeople. The underlying reason for such a policy is probably the fact that these jobs involve a certain amount of routine or mechanical skills which lend themselves more easily to measurement than do the less tangible qualities inherent in good salesmanship.

Also, stores are using these tests largely for pre-employment purposes rather than for promotional or transfer guidance, although three stores indicated that they recorded an applicant's rating on his permanent record card for future reference. Only two stores out of eight reporting on the subject stated that the score made on the aptitude test was the determining factor in the selection of an individual. The remaining six admitted that other factors such as personality, poise, appearance, etc., were given equal weight.

Although it might first appear that tests are much more important when the market is flooded and it is neces-

sary to select a few people from hundreds of applicants, it seems equally obvious that when, as in the present situation, stores have to rely on people who have had no previous retail experience, ordinary interviewing techniques cannot determine actual aptitudes for certain classes of work. Furthermore, simple home-made tests can be helpful in transferring an employee from one operation to another which he has never previously performed.

Many store executives feel that the current brand of "aptitude testing" has proved less practical and successful to date in the retail field than it has in industry. But in the field of manual dexterity tests and trade tests which disclose job knowledge and ability, there appear to be wide possibilities for more extensive and profitable application by retailers.

From *Testing as an Aid in Replacements*, National Retail Dry Goods Association, 1941, p. 20:3.

Mobile Food Units Solve Meal-Time Problem

ONE thousand four-course meals are served and consumed in 20 minutes every day at the Cessna Aircraft Company plant in Wichita, Kansas—at noon, at 8 p.m. and at 4 a.m. This feat is accomplished by 15 rolling restaurants which bring the food to the employees at their workbenches and desks.

The "Witamin Wagons," designed and perfected especially to meet Cessna's needs, aren't steam tables, but electrically heated ovens into which the luncheon plates are placed after being dished up in the central kitchen. Each wagon is rolled to a specified location where a single attendant hands out the plates when the luncheon siren sounds. Though the interior of the wagon is heated to the proper serving temperature in the kitchen, special lines are run to each of the 15 locations so that the wagon may be plugged in and correct heat maintained.

Accompanying each of the wagons is a small coffee table holding a five-gallon container of coffee. Here the diners serve themselves to butter, cream, sugar, salt and pepper. These tables are usually attended by plant employees in return for free meals.

Rolling restaurants have made possible a reduction of 30 minutes in each* lunch period, a saving of 1,500 man-hours every day.

—*American Business* 4/42

Casualties on the Home Front

WE are killing and maiming more men in our factories to-day than we are losing on our world-wide battlefronts. We have lost more time through work accidents since 1939 than we have through all the strikes which occurred in that period. Last year we lost, through industrial injuries, sufficient man-hours to build 45 battleships, 195,000 light tanks, or 30,000 medium bombers.

In too many instances management has made the mistake of assuming that industrial education should be placed under the control of academic educators. The schoolmasters are attempting to teach safety by lecturing to employees, exhorting them to stop accidents. You cannot convict employees of sin in the matter of negligence through the exercise of oratory; there must be a definite program of study, in which the workers analyze the causes which underlie all industrial accidents.

Here are four suggestions which will reduce the severity and frequency of accidents at least 50 per cent:

1. See to it that the shop and trade schools in your vicinity are staffed with shop instructors who are really qualified to teach their subjects. In general, this will mean clearing out any vocational teachers who have received their entire training in a trade in a campus machine shop or laboratory. Substitute, if necessary, elderly journeymen.

2. Reorganize all plant training on

a basis of results. Any training that is not showing results should be discarded.

3. Publicly discourage the enrollment of prospective employees in any privately owned trade school which your educational director has not investigated and found satisfactory.

4. Finally, install the rehearsed-conference method of safety training in your plant.

Briefly, in the rehearsed conference system, the educational director calls together the foremen of a department and leads them in a demonstration safety conference, exactly like the safety meetings which they will later conduct for their subordinates. He also devotes some time to teaching them how to conduct instructive and inspirational conferences.

The training man holds one two-hour meeting monthly with the foremen of a department, and during the remainder of the month each foreman has one meeting with his subordinates. The foreman devotes about three and a half hours monthly to the program; the individual workman spends one and a half hours monthly in conference—that is all. In his opening employee meeting, the foreman asks: "What are the underlying causes of accidents?" and then lists the responses on the blackboard. At first many of the causes mentioned will not be underlying ones at all. But the foreman accepts only such responses as carelessness (or negligence), worry, ab-

sentmindedness, speed, etc., and very soon the employees begin to understand what the real underlying causes of all accidents are. When they have compiled a list of 20-odd causes the foreman asks them to arrange them in order of importance.

Eventually the educational director receives from the various departmental foremen perhaps 20 or 30 lists of underlying causes. He boils these down into a master list which may look like this:

<i>Underlying Causes</i>	<i>Weight</i>
1. Negligence	339
2. Speed	265
3. Over-confidence	217
4. Lack of Knowledge	214
5. Worry	208
6. Thinking of things foreign to the job	192
7. Improper supervision	168
8. Physical defects of men	160
9. Fear	150
10. Defective equipment	144

Then it is only necessary to schedule a series of monthly meetings, one or more of which will be given over to a discussion of each cause. For each

round of employee conferences, the educational director prepares a series of discussion questions dealing with the subject at hand, based largely on concrete cases. Each question is thoroughly threshed out at the rehearsal meeting, and each supervisor is supplied with a detailed conference plan for his own meetings. In addition, the educational director attends certain of the employee meetings each month and later offers constructive criticism to the foremen.

This method, better than any other, simply stops accidents from happening, primarily because: (1) discussions of underlying causes of accidents are of absorbing interest to the employees—the fact that they continue these discussions in the intervals between conferences proves it; (2) the foreman who leads the discussions is in a unique position to see to it that all safe practices agreed to are put into effect on the job. BY ALFRED M. COOPER. *Barron's*, June 8, 1942, p. 20:1.

Women in Manufacturing

THE Census of Manufactures shows that more than 2,500,000 women were employed in factories in October, 1939, the month of peak employment for all industries combined. The great majority of these women were wage earners on production jobs, more than 2,235,000 in all. Besides these, 232,000 were clerical workers in the plants; 145,000 were concerned with distribution of the products; 10,000 were salaried officers; 16,000, managerial or professional employees.

While the average number of wage earners for the year (men and women combined) was about half a million less than in 1929, the proportion of women had increased: In December, 1929, 21 of every 100 factory employees were women; in October, 1939, practically 26 in every 100 were women. There was a marked increase in the proportions of women in five of the major women-employing industries—apparel, food preparation, leather and leather products, machinery, and stone, clay and glass products. On the other hand, women had lost ground somewhat in textiles, chemicals and non-ferrous metals and their products.

—*The Woman Worker* 11/41

A Case Study in Employee Health

TO its effective medical service and health program The Visking Corporation, Chicago, attributes a reduction in absenteeism of at least one and a half days per employee per year—which, since the company has a disability wage plan, means a direct saving of more than \$11,000 annually.

The company believes also that accident experience has been favorably affected by the medical program. While a separate safety organization is maintained, the immediate care of all injured employees, the practical elimination of infections, the tabulation of causes and types of injuries, and supervision of work assignments and general health have helped greatly in reducing both the number and the severity of accidents. Lost-time accidents have been reduced from 13 per million working hours in 1926 to an average of two per million over the last three years. A conservative estimate indicates that the medical program alone has been responsible for a reduction of 20 cents in the compensation rate—equivalent to \$3,100 annually, plus at least as much more in uninsured costs. This saving nearly pays the costs of operating the medical department.

Details of a satisfactory medical and health program will be partly determined, of course, by circumstances peculiar to each plant and its processes. A list of general principles which should guide management in any case may, however, be drawn up:

1. The medical department should

be conveniently situated and its services available to every plant employee.

2. The staff should be competent and capable of obtaining the confidence of all.

3. The equipment should be adequate.

4. Direct responsibility for the program should rest with a high official of the company in order to insure full cooperation from all departments.

5. Complete medical records of examinations, injuries and illnesses should be kept for every employee; these records should be confidential, under lock in the department.

6. Frequent summary reports, which include costs, should be prepared at regular intervals.

7. The medical department should prepare recommendations regarding accident and occupational disease prevention, sanitation, working conditions, and general health measures, based on studies in the plant.

8. Facilities for distributing information to all company employees should be provided.

At the present time the Visking medical staff consists of an experienced industrial physician and a registered nurse. Their quarters include an office, an examination room, a first-aid room, and a supply room. Since some of the manufacturing is on a 24-hour basis, all operating supervisors and foremen are instructed in first aid, and first-aid equipment is located in operating areas for use in emergencies. During the night shift, access to the

medical department is provided for the supervisor in charge, and the services of a convenient emergency hospital are available. Cases are referred to the doctor the next day.

Before the employee is hired he is given a thorough physical examination, and he is examined every year thereafter. If he is injured at work, a first-aid report is made out by his foreman and sent to the medical department; after examination and treatment, the report is returned to the foreman with a notation indicating when the patient is to return for further examination. A comprehensive report is also filled out by the foreman, the injured employee, and the witnesses and sent to the medical department. From there it goes to the safety supervisor.

Employees working in any area where toxic substances are present re-

port monthly to the medical department for a checkup—they are also given frequent psychiatric examinations. While control of hazards of this type is basically an engineering problem, the medical department at Visking obtains analyses of air in breathing zones and makes studies of exposures; in this way recommendations for improvements in safety equipment can be drawn up.

Recommendations from the medical department are sought also on such matters as cafeteria management, care of the washroom, locker rooms, restrooms, housekeeping, provision of salt tablets when temperatures are high, etc. Sports and recreation are sponsored for their value as health and morale builders. BY A. G. HEWITT. *Factory Management and Maintenance*, January, 1942, p. 74:3.

Women in Trade

IN 1939, the Census of Business shows, 34 out of every 100 employees in retail distribution (including eating and drinking places) were women, whereas in 1935 not quite 31 per cent were women. There was also a marked increase in the number of all employees, and women alone increased well over 50 per cent to 1,566,545. Total numbers employed were larger in every state, and the proportion of women employed had increased in every state but Idaho, where the decrease was very slight.

About three-fourths of the women were employed in general merchandise stores, eating and drinking places, and apparel stores. Women comprised 71 per cent of all employees in general merchandise stores, 57 per cent in apparel stores, and 47 per cent in eating and drinking places; and in each case the proportion was higher than in 1935. Not far from one-fifth of all workers were employed part time, and there were indications that more women than men were generally employed on a part-time basis. In department stores, one-fifth of all workers were on part time, and in variety stores nearly a half.

In wholesale distribution, 19 of every 100 persons employed were women, a slight increase over 1935. Women comprised more than one-third of all employees in amusement and sporting goods, drugs and drug sundries (specialty lines), and jewelry.

—*The Woman Worker* 11/41

Production Management

Management Tackles the Night-Shift Problem

A LITTLE over two months ago, the Food Machinery Corporation at Hoopeston, Ill., was operating on a normal eight-hour-day basis, manufacturing its usual quota of canning equipment. Today the machine shop, a highly skilled section which includes about one-third of the company's 382 employees, is working 24 hours a day, seven days a week, turning out bomber hoists under subcontract.

Conditions under which the Food Machinery Corporation made the change were almost ideal. For several months the company had been working with the Federal Committee on Apprenticeship in an effort to build up a supply of machinists; thus it had an adequate labor supply. There were no unions of any kind to consider, and it was not necessary to pay a premium to get night workers.

Under the schedule the company has devised, the employee works only six hours a day five days a week, 10 hours on Saturday or Sunday, and every two weeks he gets both Saturday and Sunday off. The man on the night shift stays there; he is not shifted from night to day work at frequent intervals and forced to make constant readjustments in his living habits.

While production dropped when the change was made, it soon began to pick up slowly; and it has been rising ever since. W. J. Bjorklund, plant su-

perintendent, is sure that the six-hour shift, in this case, is far more productive than the old eight-hour one—for one thing, it is short enough to make rest periods unnecessary. True, the company has found that old-timers working two 10-hour shifts a day turn out more work than youngsters plugging away on four six-hour shifts, but this is probably more a matter of skill than of hours.

However, since night work has been in progress Food Machinery has found it necessary to revise several of its ideas. For instance, it has discovered that lighting adequate for occasional night work will not do for steady night work. Individual lights have been placed on each machine, and those that can be twisted into any position have been found superior to fixed lights. Fluorescent lighting is used mainly for assembly operations.

Room temperatures are maintained at 75° because machinists seem to work better in a warm atmosphere—lathe hands, for instance, suffer if they are forced to handle cold oil. As a matter of fact, in the majority of factories where hands must be used most of the time, a temperature of 75° has been found best for efficiency.

Of the many factors in night work, one of the most important has been overlooked by industrial engineers—the human factor. Dr. N. Kleitman,

of the University of Chicago, who has spent the last 20 years studying human cycles of wakefulness and sleep, declares that workers who have spent most of their lives at day work are liable to display great inefficiency if forced to work at night, particularly if the shifts are rotated frequently. "Once in several months is often enough to change a shift," he says. "All workers will still have an equal share of work at unusual hours, but at the same time they will be given a chance to adapt themselves to a given work-meals-recreation-sleep program.

Dr. J. H. Chivers, head of the medical staff at Crane Company, Chicago, confirms the view that it is the change

rather than the night work itself which underlies the problem. However, he believes that older men can stand the change better than youngsters—probably because they are more interested in their jobs.

Since accidents are likely to increase when a change to night work is made, Dr. Chivers suggests that additional first-aid personnel be engaged. "A man injured at 11 p.m. does not want to wait until 8 a.m. the next morning for first aid," he points out. "All companies should notify their insurance firms of any changeover to night work, so that a night doctor may be hired."

By J. K. WESTERFIELD. *American Business*, February, 1942, p. 18:3.

Population Changes and Their Effects

WITHIN the past 15 years an increasing amount of attention has been given to the economic effects of the declining rate of population growth. But equally, if not more, important are the anticipated changes in the age composition of the population.

In 1940, about 6.4 per cent of the population was 65 years of age and over. By 1980, this group will constitute somewhere between 14 and 16 per cent, an increase of about 163 per cent. The group within the limits 20 to 64 inclusive, which may be taken to represent the potentially employable class, will rise from about 59 per cent to perhaps 63 per cent in 1980, and there will be a drop of about 20 per

cent in the relative proportion of persons between the ages of 20 and 24 inclusive and an increase of about 60 per cent in the relative proportion of those between 55 and 59.*

The changing age of the employable population suggests two questions: In the first place, what will be the effect on the average productivity of the employed workers? In the second place, what effect will the age changes have on the mobility of the labor force?

Of four studies of the relationship between age and productive efficiency, two indicate that wage earners attain their maximum productivity between 45 and 50, that there is a slight drop-

* Population forecasts are taken from a study prepared by the Scripps Foundation for Research in Population Problems for the National Resources Committee.

ping off between 50 and 55 and a sharper decline thereafter. In the other two studies, little indication of diminution of productive efficiency was found. However, as the writers have been careful to point out, it is possible that older workers who were unable to keep up had been dismissed. And arriving at a valid generalization is complicated also by the fact that many older workers are in occupations requiring a high degree of skill.

Other studies indicate: (1) that the physical efficiency of the worker reaches its peak when he is about 25 or 26, remains on a plateau until he reaches 40, and thereafter declines; (2) that older workers are disabled less often than younger workers, but the average length of the period necessary for recuperation rises with advancing age; (3) that there is not apt to be a rise in compensation costs with advancing age. (It is possible, however, that workers who had high accident rates or large compensation-cost records were not employed and that, therefore, they did not enter into the studies.)

It appears also that age has no appreciable effect on test scores of clerical workers up to age 40, and the differences between those above 40 and those below are not great. In general, individual differences are of far greater significance than age differences.

From these facts it can be tentatively concluded that there may be some slight decline in productive efficiency

with advancing age. However, taking into consideration other factors, many of which cannot be quantitatively expressed—the greater stability and loyalty of the older worker and his greater pride of craftsmanship, for instance—we cannot reasonably conclude that the age changes in the next 40 years will affect the productivity of the labor force materially.

Psychological findings do not indicate either that there is a significant difference between the learning ability of younger and older workers, but it does appear that workers under 35 are the most occupationally mobile and that after that age there is little shifting to new occupations. However, if it is possible to maintain full employment of men and resources over the next 40 years, it is reasonable to anticipate a rise in per capita income, and a rising income generally means that the rate of change in the economy is increased. Thus labor will have to make more, rather than fewer, adjustments at a time when it is less adapted to change, and a larger volume of technological unemployment may result.

Difficulties may arise also from another source. The group over 50, which is most vitally interested in pensions, constitutes a sizable block of the voting population. If this group is induced to throw its political power behind a movement for revision of the social insurance system, the consequences may be very serious. By HENRY L. DUNCOMBE, JR. *Harvard Business Review*, Summer, 1942, p. 437:9.

Marketing Management

Cutting Waste in the Sales Department

TO find out just how companies in consumer-goods lines are streamlining their sales operations and eliminating waste, editors of *Sales Management* employed the Ross Federal Research Corp. to interview sales department heads in Boston, Chicago, Cleveland, Philadelphia and St. Louis.

Sales managers were asked: "Within the last six months has there been any change in the details, duties or responsibilities of your own work?" Most striking point about the answers was the revelation of the amount of time sales managers spend contacting Washington or studying government regulations. Even those whose companies are not handling government contracts seem to devote about a quarter of their time to making out reports for the government, learning new regulations, and supervising operations under new price ceilings.

Postwar planning is another new job for the sales department. All the companies questioned are devoting some attention to it, although in only 7 per cent does a particular individual devote most of his time to it. Companies which have found it possible to continue more or less on a business-as-usual basis are far behind the converted industries in this respect because the sales departments of companies engaged in war production have little to do but plan for the future. The fact that the companies covered by this

survey were devoting most of their time to production of consumers' goods probably accounts for the absence of a full-time postwar planner in the majority of them.

In the sphere of general policies and operations, the most widespread trend seems to be toward dropping marginal accounts: 58 per cent of the companies reported that they were concentrating on preferred accounts. Other general policies which have been adopted by large groups are elimination of unprofitable discount arrangements (44 per cent); discontinuance of borderline or non-profit items (40 per cent); discontinuance of small units (30 per cent); simplification of packages (30 per cent); abandonment or alteration of branch office operations (17 per cent); elimination of sales conventions (19 per cent); curtailment of displays at trade conventions (25 per cent); curtailment of operations in marginal territories (18 per cent).

The salesman's job, the survey shows, has become more selective; 60 per cent of the companies examined are having salesmen concentrate on the more profitable dealer outlets or product lines or both (20 per cent have even started to handle the smaller accounts entirely by mail). Other changes which affect salesmen's operations are: reallocation of territories (29 per cent); re-routing of salesmen (35 per cent); establishment of minimum

orders or of larger minimum orders (33 per cent); changes in delivery schedules (49 per cent). Only 10 per cent so far have changed their policies respecting the entertainment of customers and prospects; those that have say, "We don't have to push for business."

Office routines and procedures are being overhauled also: 79 per cent have effected savings by reclaiming used materials, such as paper clips and rubber bands; 78 per cent have cleaned

out files to salvage waste paper, save space, and obviate the purchase of new equipment; 40 per cent have introduced smaller forms and letterheads; 31 per cent have reduced the number of copies made of office forms; 43 per cent have directed that both sides of letterheads and carbon copies be used; 52 per cent have instituted changes designed to permit orders to be cleared faster. BY PHILIP SALISBURY. *Sales Management*, June 1, 1942, p. 20:3.

What Salesmen Think of Sales Managers

WHAT qualities must a sales manager possess to win the support of his subordinates? To answer that question, the Boston Sales Managers Club mailed out 5,500 questionnaires to representative salesmen earning average or better-than-average incomes. There were 1,166 usable replies, which together with 230 received in a preliminary survey presented a composite picture of what the salesman wants in a sales manager, what he thinks about methods of compensation and about his quotas, what he thinks of methods used to stimulate him to better work, and what his "pet peeves" are.

In recent years the dominating, driving type of sales manager has gradually yielded place to the persuasive type. Salesmen recognize that occasionally a man must be driven for his own good, but they emphatically prefer the persuasive leader. "Pet peeves," for instance, included the following:

"My sales manager is a human dynamo . . . but he fails miserably to communicate his enthusiasm to his men because of refusal to lead rather than drive. . . . Result is that most of the sales force lack respect for the sales manager and consequently there is little initiative."

"'Bucko' male type. Unnecessarily discourteous. Morals of a hound. One dreads contact with him."

"In front of a customer the most wonderful fellow in the world. Jolly, good-natured and generous. In the office, exactly the opposite."

The most important quality for a sales manager to have, the salesmen declare, is "knowledge of the business," and the next most important is "integrity." While they like a man who can do the selling job better than they can themselves, they are not insistent on sales ability because they consider other qualities more important. It has, however, taken sales managers many

years to discover that fact, and even today many salesmen are promoted to executive positions on the basis of their selling records.

Most sales managers, however, appear to be doing a good job from their subordinates' point of view: 51.6 per cent of the salesmen who answered thought their superiors did an "unusually fine job," and 34.4 per cent specified that it was "a good job." The dissatisfied minority who definitely spoke of "a poor job" is sizable nevertheless: 14 per cent.

The vast majority of the salesmen believed that their quotas were reasonable and that the compensation plan was fair (nearly three-quarters of them earned between \$1,500 and \$4,000 in 1939 and one-quarter earned over \$4,000). Sales contests did not fare so well, however, as only 41.7 per cent found them "very stimulating," while 28.1 per cent found them only partially effective and 30.2 per cent "not at all effective." "The contests seem childish," one salesman wrote. "The prizes are generally valuable, but would prefer additional cash bonus. Literature

pushing contests juvenile in nature."

"Don't like them," another declared. "Poorer salesmen in the company won the contest. No true barometer."

Other conclusions which may be drawn from the survey follow:

1. Salesmen want more visits to the field from their sales manager so that they can learn from him how to do a better job and can obtain good advice on personal problems.

2. Individual conferences with sales managers should be held more often, and the sales manager should have a better understanding of the salesman's problems and point of view.

3. Group sales meetings should (a) be held more often; (b) present more factual, practical information; (c) be conducted in such a way that the salesman can take a more active part; (d) be better planned and organized.

4. Salesmen operating under branch sales managers would like more frequent individual conferences with the headquarters sales manager.

From a study by HARRY R. TOSDAL and ROSS M. CUNNINGHAM. Sales Managers Club of the Boston Chamber of Commerce, 83 pages.

Wartime Jobs for Advertising

WHAT can industrial advertising do to advance the date of victory? Here are some suggestions:

1. Put product information in the hands of those who must procure machines and materials. Presenting complete, factual information on industrial products and materials is an important job.

2. State the availability of products. When hurried buyers choose the materials they want from catalog or service advertising, it is essential for them to know whether the products are available within the required time.

3. Help train new workers. Advertising and literature which describe the operation of equipment—"how to use" product information—can do this.

4. Use advertising pages to promote proper machine and product maintenance. Preach and teach elimination of waste by proper use and point out opportunities for salvage of vital and needed materials.

—W. DONALD MURPHY in *Modern Industry* 5/15/42

Financial Management

Cost Estimating for Government Contracts

IT is Friday afternoon. The new job to be quoted on is "in the mill." It will have to move along fast—those figures must be in the hands of the contracting officer by Monday morning. The purchasing agent is on the phone getting prices from Pittsburgh on the special size of steel in that alloy the firm never heard of before.

At this point the cost accountant comes to grips with his conscience. His first impulse is to allow plenty of margin—to play safe. But this is war work, and it seems like treason to take an unnecessary dollar; moreover, there is always a chance that someone may underbid him. Accordingly, it is well for the accountant who makes such estimates to try to keep the safety margin at a minimum.

Listed below are some of the points the estimator should check when getting his information:

1. Get the analysis of the material specified. Remember that the labor estimate depends upon knowledge of the machinability of the material. Also, exact analysis may save time when securing quotations on raw material.
2. Determine what priority rating and urgency number will be granted, not only for materials but for tools and equipment which may have to be purchased.

3. Inquire whether the raw material will have to be inspected at the source or at your plant.
4. Get samples, where possible, if the product is unfamiliar and the contract sizable. It may be possible to observe the manufacture of the same article at some other plant.
5. Ascertain what methods of packing are permissible.

Federal regulations place some restriction on the assistance which the contracting officer can provide, but the approximate price *range* may be made known to the contractor, to prevent his losing time if his facilities will not permit him to compete. Also, advice on machining methods, speeds and feeds may be made available, and bidders may even be apprised of the required machining time. If the job is a sub-contract, the prime contractor may use his own cost figures in an attempt to dictate the price; often this takes the form of an agreed price per hour, which is extended by the number of hours required by the prime contractor to perform the work. In that case the safest procedure is to obtain a detailed breakdown—operation by operation—of the time in the prime contractor's figures, and have the operation costs checked by your own shop methods man.

Estimating the labor cost on unfamiliar work should not, in fact, be

a one-man job. It is definitely advisable to have such proposals reviewed by the tool designer, the shop methods man, and the rate-setter. The labor estimate must include provision not only for extra time but possibly for overtime bonuses, shift allowances, daywork allowances, and higher rates if extra skilled labor will be required.

If the overtime bonus is charged off to expense, the cost of each labor operation will be burdened proportionately to productive hours (or machine-hours or value of productive labor). If a proration of actual overhead is customarily made, the actual experience during a given time is reflected in the cost records—the historical cost records—and if the new work will not require more overtime, past actual overhead rates will suffice for the estimate. However, if standard overhead rates are to be used, it must be ascertained whether they contain sufficient provision for the overtime anticipated. If not, the rate may be adjusted to include the bonus, provided the adjustment is not canceled out by other factors, such as favorable volume variance which may be undesirable on government contracts where costs should be realistic.

Direct application of the overtime bonus to the job on which the overtime was required has some advantage in the event your cost records are later questioned, for it will be possible to show the date, the operator, the rate of pay, and the operation. But there is considerable difficulty and expense involved in making the allocations to all the job cards, and it is an indisputa-

ble fact that many urgent jobs are actually performed during regular hours, thus forcing the less urgent jobs into later hours when the bonus becomes effective.

Another point is that the cost of setups is often buried in the standard overhead rates, and it may be well to consider whether the provision for setups in a government cost estimate will be proper. The setup provision may be eliminated from the overhead rate and a separate calculation of setup expense made, based on quantities desired, production schedules, and tool life. Where the machine has to be held idle while the first piece is approved, the cost, if appreciable, may be included. Other adjustments of standard burden rates may be advisable for such reasons as: rearrangement of equipment, minor alterations to buildings, learning time and instruction time, extra supervision and inspection, higher scrap loss, increased protection by special watchmen, etc.

In the case of a negotiated bid, the cost figures compiled by the government are not made available to the bidder. However—to take a Navy job as an example—when costs are out of line the discrepancy will be analyzed, and the Navy may ask for a detailed breakdown of the actual overhead for some recent period. If this contains elements which it does not admit as chargeable, an adjustment is required.

The Navy defines "contingency" as a "planned extra expense" and requires you to state what it is that you expect to happen, when it is going to

happen, and how much it will cost. This seems harsh to a bidder who wishes to be protected against loss, but it must be remembered that no provision exists in this type of contract for the government to recover contingent amounts that are not required. The bidder is asked to assume all the risk on the fixed-price contract, and

must seek an escalator clause or cost-plus contract if he wishes further protection. It is true that even contracts without the new re-negotiation clause may be subject to re-negotiation, but this is not generally considered a factor by either party. BY MAX F. THOMPSON. *N.A.C.A. Bulletin*, July 1, 1942, p. 1415:14.

Insurance

War Damage Insurance

IF you have not applied for and received enemy air-raid or bombardment insurance on your property, you alone will have to bear the brunt of any war damage your property may sustain. If you want Uncle Sam to shoulder the burden for you, pick up your telephone and instruct your insurance agent to cover you in the War Damage Corporation of the RFC.

Up to now, government bombardment insurance has been free; from now on it must be paid for, although rates are low. Policies will be issued for a 12-month period to cover loss of real and personal property which may result from enemy attack or from action of our own forces in resisting enemy attack. Excluded from coverage is damage caused by sabotage, capture, seizure, pillage, looting, and losses incurred in blackouts which are not due to enemy action. Insurance will be written only on the form of policy prescribed by the War Damage Corporation and will cover only direct

physical damage to or loss of the property insured. There is no consequential coverage, such as use and occupancy, rent and rental value, or coverage for other indirect losses.

No protection is provided for accounts, bills, currency, deeds, evidences of debt, securities, money, bullion, stamps, furs, jewelry, precious and semi-precious stones, works of art, statuary, paintings, pictures, etchings, antiques, stamp and coin collections, manuscripts, books and printed publications more than 50 years old, models, curiosities, objects of historic or scientific interest, pleasure watercraft, pleasure aircraft, standing timber, growing crops, orchards, or any real property which is now a part of a structure or building. Some of the foregoing types of property, however, may be covered if separate application or endorsement is made.

Rates for apartments, office buildings and warehouses are 15 cents on \$100, if fire-resistive, and 20 cents if

of ordinary construction; for manufacturing plants, wharves and bridges, 20 cents if fire-resistive, otherwise 30 cents; for property in transit, 3 cents; and for dwellings, rural and urban, including contents, 10 cents on \$100. The minimum premium is \$3 per policy. No coinsurance will be required on farm buildings and dwellings, but on all other property a 50 per cent coinsurance will be required, with fixed credits from established rates for coinsurance above 50 per cent.

Where more than one property is under the same ownership, whether at one or more locations, all such properties may be insured under one policy for an amount covering blanket on all such properties, provided that the application (and the schedule, if any) sets forth the approximate distributions of the total coverage on all such

properties according to the respective states, territories, possessions, and coded cities of location. The rate for blanket insurance will be the rate for the highest-rated building or location. The pro rata distribution clause applies with respect to blanket insurance written subject to less than 90 per cent coinsurance.

"The other insurance" clause of the policy provides that if there is any other insurance covering the property, whether prior to, subsequent to, or simultaneous with the insurance under the policy, which, in the absence of the insurance under the WDC policy, would cover the loss or damage, the insurance under the WDC policy becomes "excess insurance" and does not apply except over and above such other insurance.

BY A. WILBUR NELSON. *Credit and Financial Management*, July, 1942, p. 13:4.

War Risk Coverage of Accounts Receivable

IN recent years the monopoly on insurance comment, formerly held by the insurance fraternity, has been broken here and there by vigorous personalities from the policyholders' side of the fence. One of the most intelligent of these is A. P. Lange, of Hale Bros., Inc., San Francisco, who has been campaigning of late for more definite and comprehensive land war risk insurance. When he accuses the insurance companies of having "run out on us," he is using strong words, but the *Journal of American Insurance*

feels that insurance executives might well weigh his words.

In a recent speech dealing with insurance on accounts receivable, Mr. Lange declared: "In the past, the hazards of war operations were included in those insured against under the accounts receivable policy. Even after it seemed to most of us that we would become involved in the war, such insurance could be secured, but immediately after Pearl Harbor, insurance companies, almost without exception, relieved themselves of lia-

bility for all forms of land war risks. In the case of insurance of accounts receivable, this was done by endorsing existing policies to exclude land war risks or by canceling the policies outright.

"Some may be under the impression that losses due to destruction of records may be covered by insurance provided or to be provided by the Federal Government, but such is definitely not the case. Notwithstanding, insurance on accounts receivable as broad in coverage as any which has heretofore been written is obtainable. I make this statement advisedly because I have been able to obtain such insurance for my principals. How others can secure such insurance I cannot say. It depends partly upon the market at the time of application; also on you, and on your broker's relations with the few companies which write this form of coverage. Obviously, these few companies will give preference to those who have given or are prepared to give them preference in other cases. Above all else, obtaining broad accounts receivable insurance will depend on your cooperation in safeguarding your records."

Bringing up the question of conditional sales, Mr. Lange continued: "What would be your situation if your debtors were rendered insolvent by the destruction of their property? Ordinarily such a loss can be taken in stride, but in the case of a great catastrophe, such as the bombardment of a residential section of a city, the situation may become serious. That such an event may occur has been urged by

the insurance companies as a reason for their refusal to write war risk insurance on residential property. How shall we protect ourselves against such losses?

"In considering the answer to this question, let us also consider the same question as it relates to conflagration losses not caused by war activities. In the case of merchandise destroyed while in the custody of customers purchasing same on contract, many merchants have sought to prevent losses to themselves by insuring their interest therein. In case of the destruction of the merchandise, the customer is relieved of making further payments.

"This, of course, builds good will. In some instances such insurance has been extended to include the interest of the customer. Where such insurance can be obtained under forms which, either by specific declaration or otherwise, indemnify for losses due to hazards created by war, it seems ideal. Here again I say that your ability to obtain such insurance depends upon you and upon your broker's relations with the insurance companies.

"So far as I know, merchants have never undertaken to carry insurance on merchandise purchased on open accounts, and I can see no more reason why they should carry such insurance in time of war than in time of peace. However, unless such insurance is carried, you are always confronted with the possibility that an untoward event may turn a good account into a bad debt." *Journal of American Insurance*, May, 1942, p. 23:2.

The Management Question Box

Questions and Answers on Management Practice Based on the Inquiries Received by the AMA Research and Information Bureau.

Individual replies are made promptly either by mail or telephone to inquiries received by the Research and Information Bureau. This service is available to executives of concerns holding company memberships. The questions cited here are those which it is believed are of general interest to the membership.

Wage Incentives in Collective Bargaining

Question: Under what circumstances have unions accepted incentive methods of wage payments?

Answer: Incentive wage methods are widely accepted by unions in the clothing, coal mining, hats and millinery, hosiery, rubber, and shoe industries. They have been accepted also in a substantial part of the electrical equipment, flat glass, non-ferrous mining and fabrication, steel, and textile industries; and in some cases in the aircraft, ammunition, automobile, leather, luggage and belting, machinery, machine-tool, meat-packing, non-ferrous smelting and refining, pulp and paper, and shipbuilding industries. In a few instances, too, wage incentive plans have been accepted by unions in the building, chemical, explosives, and printing and publishing industries. The term "incentive methods of wage payment" includes piecework as well as the more complex premium or bonus systems.

A survey on this subject is being conducted by the Industrial Relations Division of the U. S. Bureau of Labor Statistics, and an advance memorandum has been issued, listing these industries, together with comments on conditions in each. In general, incentive plans which were established before the workers became organized have been continued under collective bargaining, although in some cases they have been abolished or modified as a result of union pressure. On the other hand, unions have occasionally agreed to the extension of incentive plans to workers not previously covered.

Traditionally, unions oppose wage incentives because they fear rate-cutting and the speed-up. The fear is partly due to bad management practice in the past, but this does not mean that the problem can be solved by guarantees against rate cuts. Actually, a number of complicating factors are involved.

There may be great difficulty, for instance, in drawing the line between rate-cutting and legitimate rate revision. Where there is efficient manage-

ment, there will be continual improvement of processes, materials and equipment. Workers—and unions generally—do not question the employer's right to revise rates on operations which have become easier to perform. But workers themselves sometimes invent short cuts which amount to changes in process, thereby increasing their earnings—only to have their rates cut when the next time study is made. It may, in practice, be difficult to distinguish management contributions from those of labor, and both from changes in specifications. And the action taken by an employer's competitors often proves another complicating factor.

Then, too, according to the Bureau of Labor Statistics memorandum, the workers have a fundamental distrust of "scientific management" anyway, and any purely "scientific" approach to their jobs makes them uneasy. They feel that almost every job contains elements which cannot be evaluated by the quantitative stop-watch method, pointing out that the time-study "allowances" for delay, fatigue and personal time are arbitrarily determined and that there are unpredictable variations in the quality of materials, in working equipment, and in other factors.

Where incentive wage rates are determined by collective bargaining, however, the workers may have a different point of view. Controls which unions demand are of three types:

1. Specific safeguards which provide certain guarantees and prohibit certain incentive practices.
2. The right of the union to participate in the adjustment of incentive rates and standards. This is a common provision in the clothing industries, where piece rates prevail, but it does not exist to any great extent elsewhere.
3. The right to appeal any rate which a member considers unsatisfactory, usually through the regular grievance procedure. This is the most prevalent control and is generally in use, along with either of the other controls.

The memorandum also cites several examples of incentive wage clauses in union agreements in different industries.

Overtime for Exempt Employees

Question: Do most companies pay overtime to supervisors and other salaried employees who are exempt under the Fair Labor Standards Act or the Public Contracts Act?

Answer: This question was answered in THE MANAGEMENT REVIEW for March, 1941 (p. 111) on the basis of a survey of 60 leading companies made by E. S. Cowdrick. At that time policies varied widely, and many of the com-

panies included were still studying the question. Apparently the most prevalent system was to allow equal time off for overtime or to give consideration to overtime work in determining salaries or bonuses.

Responses to inquiries sent to the same companies in April, 1942, show a trend toward greater recognition of overtime work in companies engaged primarily in war production. This is doubtless due to the fact that the hours of executives, supervisors and other exempt employees in such companies are considerably longer than they were a year ago.

In companies which require overtime work so often that it amounts to an increase in normal working hours, the matter is probably being taken care of, in a number of cases, by salary increases, but it is difficult to generalize because of the wide variety of methods reported. Payment for casual overtime caused by emergencies or unexpected situations is not so general.

A few companies pay overtime to all employees below a certain salary level. A food manufacturing company, for instance, pays exempt employees time and a half after 40 hours a week if they earn less than \$200 a month, while two firms doing war work pay overtime to all who make less than \$300.

There does not appear to be any trend, among the companies surveyed, toward withdrawing from salaried employees the privilege of time off with pay for personal reasons.

Liability Insurance and Car-Sharing

THERE has been some concern on the part of those who are carrying fellow employees to and from work in their private cars as to whether their insurance will be affected if they accept payment for such transportation. In New York they are protected by special action of the State Insurance Department.

Prior to July 29, 1941, the standard automobile policy carried an exclusion clause which stated that the policy did not apply if the automobile carried persons for a charge, unless this use was specifically declared and described in the policy and a premium charged for it. By paying 10 per cent supplementary premium, the owner of a private automobile who occasionally carried fare-paying or expense-sharing fellow employees could purchase insurance coverage excluded by the clause.

To encourage voluntary efforts to reduce the consumption of gasoline, the Insurance Department of New York State approved, as of July 29, 1941, a filing which waived the 10 per cent additional premium charge for limited-livery coverage. Owners of private passenger cars in New York are now covered when they carry fellow employees to and from work, whether or not they charge a fare, and even if their passengers are employees of another company. No endorsement is needed and no fee need be paid.

The standard provisions policy as amended effective October 20, 1941, deleted the exclusion clause. The Insurance Department suggests that employees who have policies containing the old exclusion clause ask their insurance carrier to endorse the policy to show clearly that the limited-livery hazard is now covered. There is no additional premium charge for this endorsement.

—The Conference Board Management Record 6/42

Survey of Books for Executives

Dismissal Compensation and the War Economy. By Everett D. Hawkins. Pamphlet Series No. 7. Committee on Social Security of the Social Science Research Council, Washington, D. C., 1942. 81 pages. 50 cents.

In the light of dismissal compensation experience in the United States and other countries, Mr. Hawkins has attempted to appraise the possible value of the dismissal bonus as a means of lightening the impact of postwar unemployment. In Part I of this pamphlet, existing types of dismissal compensation plans and modifications which have been suggested are examined with a view to determining how far they can go in aiding displaced workers in the postwar period. Part II discusses the relation of dismissal pay and deferred pay or compulsory savings plans to the problem of controlling wartime inflation and postwar deflation. This division of the subject matter is intended to facilitate the separate evaluation of the two purposes that advocates of dismissal compensation ascribe to it.

Originally the author, who is a member of the Department of Economics and Sociology of Mount Holyoke College, undertook a study of wartime repercussions on social security meas-

ures in general. However, after a period of preliminary research, he concluded that the study would prove more valuable if it were directed toward one of the principal segments of the overall problem and did not attempt to deal with the entire problem in over-all terms. Nevertheless, in his second chapter he has sketched briefly the significant aspects of several other measures which may be used to meet the postwar displacement problem.

Plant Efficiency: Ideas and Suggestions on Increasing Efficiency in Smaller Plants. Division of Information, War Production Board, Washington, D. C., 1942. 39 pages. Gratis.

The small- or medium-sized manufacturer who is trying to step up production for the war effort will find practical help in this booklet which covers such matters as lighting, care of tools, safety precautions, keeping track of orders, production and materials. Particularly good is a section on swing shifts which explains how hours are scheduled for 168-hour production and offers sample schedules. There is also a section which explains simply and concisely how production control charts may be used.

Some of the information presented

may seem elementary to those who have been familiar with large-scale efficiency programs for years, since the booklet is intended mainly for the small manufacturer who has not been too diligent in following the latest advances in management methods. However, even those who are familiar with most of the facts given may find it useful as a check list.

Occupations Suitable for Women. Occupational Analysis Section, U. S. Employment Service, Washington, D. C., 1942. 103 pages. Obtainable from the Superintendent of Documents, Washington, D. C., 35 cents.

This pamphlet presents the findings of a detailed study of 1,859 different jobs in 21 key war industries and 937 non-war jobs, undertaken to determine those in which women may be successfully employed.

For each occupation listed the study

indicates how long a period of training is required; whether or not women are already employed in such work, or could be successfully employed if they had the proper training; and the industries in which the occupation occurs. The volume is intended primarily as a guide for management hiring officials and for United States Employment Service personnel in promoting large-scale induction of women workers to replace men needed for military service or more highly skilled jobs.

The war industries covered by the survey are manufacture of aircraft and parts, air transportation and service, aluminum products, munitions manufacture, automobile, motorcycle, truck and tank manufacture and equipment, communications, electrical machinery, firearms, industrial chemicals, iron and steel and their products, machine tools, machine models and patterns, foundries, professional and scientific instruments, railroad equipment, shipbuilding and repairing, utilities, and petroleum production and refining.

